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Kim

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(54) **MODIFYING SEARCH RESULTS BASED ON SELECTION OF ONE OF THE SEARCH RESULTS**

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(58) **Field of Classification Search**
None
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,960,422 A 9/1999 Prasad
8,051,076 B1 11/2011 Garg et al.

2004/0254932 A1 12/2004 Gupta et al.
2008/0140657 A1 6/2008 Azvine et al.
2010/0082610 A1 4/2010 Anick et al.
2011/0208712 A1 8/2011 Jones et al.
2012/0331420 A1 12/2012 Meyer et al.
2013/0124555 A1* 5/2013 Duquene G06F 17/30873 707/769
2015/0310104 A1* 10/2015 Marchisio G06F 17/30731 707/722

FOREIGN PATENT DOCUMENTS

WO WO2004031991 4/2004

OTHER PUBLICATIONS

International Search Report and Written Opinion of PCT Serial No. PCT/US14/053198 Dec. 4, 2014.

* cited by examiner

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(57) **ABSTRACT**

Methods and apparatus for modifying search results based selection of one of the search results by a user to whom the search results are presented. Initially provided search results may include at least a first set of search results that are associated with a first entity and a second set of search results that are associated with a second entity. In response to a user selection of one of the search results of the first set, the initial search results may be modified to demote and/or omit those search results of the second set that are not also of the first set. The user may be provided with the modified search results.

19 Claims, 10 Drawing Sheets

